INTRODUCTION

Appendicular diverticulosis is a disease in which multiple outpouchings arise from the appendicular wall. Appendicular diverticulosis is one of the rare diseases of vermiform appendix; having incidence of only 0.8% in appendectomy patients. It was first reported in 1893, and since then very few case reports have been published on this disease. Etiology and pathology of appendicular diverticulosis are still poorly understood; it may be due to the rarity of the disease. Clinically, appendicular diverticulosis presents with pain in the right iliac fossa and mostly misdiagnosed as acute appendicitis. Correct diagnosis is usually made either intraoperatively or on histopathological examination of resected appendix.

Here, I report a case of appendicular diverticulosis which presented as appendicitis.

CASE REPORT

A 44-year male patient of Asian origin; working in a plastic factory for the last 18 years, presented in surgical OPD with complain of pain in the right lower abdomen for the last 2 days. Pain was mild, continuous, non-radiating with no other associated symptoms like fever and vomiting.

There was a previous history of similar pain 2 years back which had subsided spontaneously in 2-3 days. There was no significant family history. On examination, he was well oriented and hemodynamically stable. His general physical examination was unremarkable. On systematic examination, his abdomen was soft, having mild tenderness in the right iliac fossa with no rebound tenderness and cough impulse. Groin and genitals were unremarkable. Clinically, patient was diagnosed as acute appendicitis. On investigations, hemoglobin was 13.9 g/dL and leucocyte count was 7,800/µL, in which neutrophils were 57%. On ultrasound abdomen, a non-compressible target lesion of about 12.8 mm diameter was seen in right iliac fossa. In the light of clinical findings and investigations, the final diagnosis of acute appendicitis was established and plan for operative management was made.

During operation for appendectomy, it was found that appendix showed multiple diverticula (Figure 1) with appendicitis as well. Diverticula were six in number and were present all around the circumference of appendix, i.e. not limited to mesenteric or anti-mesenteric border. The diverticula were neither inflamed nor had any adhesions with the surrounding structures. There was no perforation or any collection of pus around them; however, the appendix was grossly inflamed, edematous and thickened. Appendectomy was performed uneventfully. Patient recovery was excellent; and he was discharged from the hospital after 2 days of stay. The patient was followed-up in OPD till 14th postoperative day and then on phone for a year, to ensure that he did not develop any complication.
The appendectomy sample was sent for histopathological examination. Microscopy showed focal infiltration of acute inflammatory cells with numerous eosinophils in the wall of appendix. No malignancy was detected. Focally, the appendicular wall showed outpouchings of mucosa and sub-mucosa with attenuated to absent muscularis propria and serosa (Figure 2). There was no significant inflammation noted in diverticula.

**DISCUSSION**

Appendicular diverticulosis is a rare entity, with an incidence of 0.8% in most of the studies. The incidence varies between 0.004 to 2.1% in appendectomy patients. Mean age for presentation of this disease is 35.0 ±10.2 years with higher prevalence in males, varying between 69.2 - 96%. Presentation of appendicular diverticulosis with appendicitis, as in this case, is the second most common presentation of appendicular diverticulosis. Most common presentation is the acute appendicular diverticulitis with acute appendicitis, while appendicular diverticulitis with normal appendix and only diverticulosis without any complications are less common presentations.

By critically analyzing the data from previous case reports and series, including this case report as well, we found that in appendicular diverticulosis, diverticulitis is not the etiological factor of appendicitis, as is commonly misunderstood. Even in patients having both diverticulitis as well as appendicitis concurrently, it is not confirmed that diverticulitis is the cause of appendicitis. No standardized differentiating criteria are available until now in the medical literature to recognize the primary event; some reports have discussed the importance of distance between inflamed portion of appendix and diverticulitis. If distance is appropriate between the two, then both are separate and independent events. But if inflammation is confluent, then either diverticulitis is the primary event and involvement of appendix (appendicitis) is secondary or vice versa. However, to support and prove the authenticity of this criterion, more scientific tools and studies are needed.

Appendicular diverticulosis, along with its complications like diverticulitis, is a separate entity from appendicitis. Both have distinct etiology and disease process, but can mimic each other clinically and may be found concurrently. Moreover, the therapeutic management for both is the same, i.e. appendectomy.

**REFERENCES**